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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PREVIL, DANIEL

ART UNIT

PAPER NUMBER

2632

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/848,827

Applicant(s)

ECKSTEIN ET AL.

Examiner

Daniel Previl

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 12, are rejected under 35 U.S.C. 103(a) as being unpatentable over Rubin (US 6,232,878).

Regarding claims 1,12, Rubin discloses a transmitter 12 for radiating first electromagnetic signal at a predetermined primary frequency (transmitter 12 includes frequency of the first alternating electric signal, establishing a first electromagnetic field with the security tag 14) (col. 9, lines 49-67); a resonant tag secured to the article (a resonant security tag 14 secured to article security system 10) (col. 8, lines 24-31) for generating a second electromagnetic signal in response to receiving the first electromagnetic signal, the second electromagnetic signal being at the primary frequency and at a predetermined secondary frequency different from the primary frequency (security tag 14 generate a second electromagnetic field upon receiving at the receiver 18 a first electromagnetic field, a plurality of distinct frequencies separated by quiescent periods of time) (col. 10, lines 13-36); a receiver for receiving a second electromagnetic field (receiver 18 for receiving second electromagnetic field) (col. 10, lines 17-20); a computer connected to an output of the receiver (data

processor 20 connected to an output of the receiver 18) (fig. 3), computer processing the received second electromagnetic signal (the receiver 18 operates to detect the disturbances in the electromagnetic field from the received alternating electric signal to a data processor 20) (col. 8, lines 55-61) and generating an output signal when the secondary frequency is detected in the second electromagnetic signal (receiving antenna 16b is provided for sensing disturbances in the electromagnetic field resulting from the presence of the tag and providing a signal to a receiver 18) (col. 8, lines 40-61).

Although, Rubin discloses every feature of the claimed invention but fails to specify that computer processing generating an output signal when the frequency is detected in the electromagnetic signal. Since, Rubin discloses a receiving antenna 16 b for sensing disturbances in the electromagnetic field resulting from the presence of the tag 14 and providing a signal to a receiver 18) (col. 8, lines 52-61). So, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the data processor 20 to generate an output signal when the disturbances in the electromagnetic field have been detected for reducing the probability of false alarms and increasing the probability of detecting accurately tag within the detection zone.

Regarding claim 2, Rubin discloses a tag 14 comprises a first resonant circuit at the primary frequency and a second resonant circuit at the secondary

frequency, the first and second resonant circuits being electromagnetically coupled (col. 4, lines 14-30).

3. Claims 3-7, 13-15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Rubin in view of Engellenner (US 5,798,693)

Regarding claims 3, 13, Rubin discloses all the limitations in claim 1 but fails to explicitly disclose pulse amplitude modulated.

However, Engellenner discloses pulse amplitude modulated (fig. 8; col. 9, lines 19-28).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Engellenner in Rubin. Doing so would detect accurately presence of a tag within the detection zone.

Regarding claims 4, 14, Rubin discloses receiver detects the primary frequency and generates an output signal only when the primary and the secondary frequencies are both detected (col. 8, lines 51-61).

Regarding claims 5, 15, Rubin discloses the receiver 18 is tuned successively to the primary frequency and to the secondary frequency (col. 10, lines 13-27).

Regarding claim 6, Rubin discloses the primary and the secondary frequencies are not harmonically related to each other (distinct frequencies) (col. 10, lines 34-35).

Regarding claim 7, the above combination discloses all the limitation in claim 3 and Engellenner further discloses a passive tag which includes only inductive and capacitive elements (col. 9, lines 29-37).

4. Claims 8-9, 16, are rejected under 35 U.S.C. 103(a) as being unpatentable over Rubin.

Regarding claims 8,16, Rubin discloses a transmitter 12 for radiating first electromagnetic signal at a predetermined primary frequency (transmitter 12 includes frequency of the first alternating electric signal, establishing a first electromagnetic field with the security tag 14) (col. 9, lines 49-67); a resonant tag 14 including the plurality of resonant circuits (fig. 1; col. 8, lines 24-31), each of the resonant circuits resonating at one of other different resonant frequencies (distinct frequencies) (col. 10, lines 34-35), the tag receiving the first electromagnetic signal and a second electromagnetic signal in response to receiving the first electromagnetic signal, the second electromagnetic signal comprising a plurality of secondary frequencies, each of the secondary frequency corresponding to one of the resonant frequencies of the plurality of resonant circuits (second alternating electric signal comprises a plurality of frequencies) (col. 10, lines 13-36); a receiver for receiving a second electromagnetic field (receiver 18 for receiving second electromagnetic field) (col. 10, lines 17-20); a

computer connected to an output of the receiver (data processor 20 connected to an output of the receiver 18) (fig. 3), computer processing the received second electromagnetic signal to detect the presence of the plurality of secondary frequencies (the receiver 18 operates to detect the disturbances in the electromagnetic field from the received alternating electric signal to a data processor 20) (col. 8, lines 55-61) and generating an output signal corresponding to the information (receiving antenna 16b is provided for sensing disturbances in the electromagnetic field resulting from the presence of the tag and providing a signal to a receiver 18) (col. 8, lines 40-61).

Although, Rubin discloses every feature of the claimed invention but fails to specify that computer processing generating an output signal corresponding to the information. Since, Rubin discloses a receiving antenna 16 b for sensing disturbances in the electromagnetic field resulting from the presence of the tag 14 and providing a signal to a receiver 18) (col. 8, lines 52-61). So, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the data processor 20 to generate an output signal when the disturbances in the electromagnetic field have been detected for reducing the probability of false alarms and increasing the probability of detecting accurately tag within the detection zone.

Regarding claim 9, Rubin discloses a tag 14 comprises a first resonant circuit at the primary frequency and a second resonant circuit at the secondary

frequency, the first and second resonant circuits being electromagnetically coupled (col. 4, lines 14-30).

5. Claims 10-11, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rubin in view of Engellenner (US 5,798,693).

Regarding claims 10, 17, Rubin discloses all the limitations in claim 1 but fails to explicitly disclose pulse amplitude modulated.

However, Engellenner discloses pulse amplitude modulated (fig. 8, col. 9, lines 19-27).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Weaver in Rubin. Doing so would detect accurately presence of a tag within the detection zone.

Regarding claim 11, the above combination discloses all the limitation in claim 10 and Engellenner further discloses a passive tag which includes only inductive and capacitive elements (col. 9, lines 29-37). Same motivation as claim 10.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bowers (US 5,602,556) discloses a transmit and receive loop antenna.

Herman et al. (US 4,670,740) discloses a portable batterless, frequency divider consisting of inductor and diode.

Charlot, Jr. (US 4,481,428) discloses a batteryless, portable, frequency divider useful as a transponder of electromagnetic radiation.

Everett et al. (US 5,317,330) discloses a dual resonant antenna circuit for RF tags.

Lian (US 5,414,412) discloses a frequency dividing transponder including amorphous magnetic alloy and tripole strip of magnetic material.

Lauro et al. (US 5,604,486) discloses a Rf tagging system with multiple decoding modalities.

Charlot, Jr. (US 5,517,179) discloses a signal powered frequency-dividing transponder.

Wahlstrom (US 4,023,167) discloses a radio frequency detection system and method for passive resonance circuits.

Weaver (US 5,900,816) discloses an anti-shoplifting security system utilizing a modulated transmitter signal.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Previl whose telephone number is 703 305-1028. The examiner can normally be reached on Monday-Thursday. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel WU can be reached on 703 308-6730. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Daniel Previl
Examiner
Art Unit 2632

DP
February 27, 2003


DANIEL J. WU
PRIMARY EXAMINER

3/9/03